1909
M. Harland

CALIFORNIAN BULBS

GROWN BY

CARL PURDY

UKIAH, MENDOCINO COUNTY
CALIFORNIA

SHOUT
SHARE
IT

TERMS, Cash With Order

Safe Carriage Guaranteed. I guarantee that all bulbs shall reach my customers safely and that they shall be of good quality. If they are lost in transit, or are not good, I will either replace them or refund the money, at my option.

Claims for Damage. Claims for damage must be made on receipt of goods.

Quality of Bulbs. A large part of my bulbs are grown at "The Terraces," and are of superior quality, and, whether collected or imported, it is my aim to sell only the best.

Date of Shipment. All Californian bulbs should be planted in either fall or early winter if the best results are desired. Very few can be kept in good condition later than January 1. I will not fill orders for erythroniums later than December 1, and after January 1 I can supply only lilies. While tulips, daffodils and hyacinths can be planted in California as late as February 1; the results are so much poorer than if planting is done as early as November, that I would earnestly urge customers to order early.

Expressage, Postage or Freight. In every instance I deliver goods free of carriage within the United States. Under the new postal regulations I can ship eleven pounds by post to Great Britain, Germany and some other countries; four pounds, six ounces is the limit to Holland. I can pack any order in parcels within these weights, and will in every case prepay postage and guarantee safe delivery. The post is both cheaper and more rapid for foreign shipments.

Prices quoted are each and per dozen. Six will be sent at dozen rates.

Dutch Bulb Catalogue mailed on request.

One of the hillside gardens at "The Terraces"

RETAIL PRICE-LIST OF

CALIFORNIAN BULBS

CARL PURDY
Ukiah, Mendocino County, California

Calochortus Vesta

An exquisite Mariposa Tulip, with long stems for cutting—white lilac or rose

Introduction

IN 1879, when I was but eighteen years of age, I began collecting the wild bulbs, plants and seeds of California for an eastern firm,—the first in America to make a specialty of hardy American plants, as well as of hardy perennials. I was then just setting out in life as a school-teacher, and, during the next nine years, bulb-collection filled my vacations and other unoccupied hours; but, by 1888, it had grown to where I could make it a life work. Each year my knowledge of plants had become greater, my collecting trips longer, my connections wider; and my garden experience has grown in the same ratio. After several sites for bulb-growing had been tried, I discovered the peculiar fitness of a little valley high in the Coast Range which separates Mendocino from Lake county.

Lyons Valley, as it is called, is at an elevation of very nearly 3,000 feet above the sea, while the town of Ukiah, nine miles away, is but 600. It is perfectly fitted for many kinds of bulbs, but no more so than " The Terraces," my present home, which is but a mile away, and at present my gardens are at both places.

At " The Terraces," a favorable climate, an abundance of water, and a wonderfully wide variety of soils and exposures combine to make an ideal garden spot, while from the scenic standpoint, it is probably the most unique garden in the world. While I use terraces in my hillside gardening, " The Terraces " themselves are natural. Large springs feed a stream which flows down a little vale in the face of a high mountain range. Perhaps a quarter of a mile from their source they tumble over a limestone bluff to another level, then again and again to other terraces until four have been passed.

The bluffs are from 50 to 70 feet each in height, and on their face is a succession of cascades and waterfalls. The gardens occupy all of the valley, the slopes and the successive terraces, while every nook and corner is utilized for the naturalization of colonies of ferns, lilies or other plants.

Visitors are welcomed, and can reach the place by good wagon roads from Ukiah, eight miles away. As there are several miles of mountain grades, safe horses should be secured and a vehicle with a brake.

The road first crosses the beautiful Ukiah valley, and passes the Insane Asylum. Five miles out it enters Mill Creek Cañon, a gorge as pretty as California contains. The last two miles are up the grades, and about two hours and a half are required to make the out trip, while half as long is sufficient for the return.

The season opens with April, and the first great bloom is of my daffodils. Of these I have about eighty sorts. By the fifteenth of April early tulips are at their best, and are followed later by my magnificent collection of late and Darwin tulips. These make the finest show of the year, and are usually at their best the last week in the month. During this time there has been a succession of dainty, small flowers, such as the dog's-tooth violets and star tulips.

May brings irises, peonies and Mariposa tulips, but no lilies; by the last week in June these are in their glory and are a great sight.

After July, the bulbs die down and I have only scenery to show my visitors. Of course I have many pretty flowers, too, but nothing that I make a specialty of.

Ukiah is reached by rail, via the Northwestern Pacific, which starts at the Ferry depot at San Francisco. Two trains a day arrive in Ukiah. The first leaves San Francisco at 7.40 A. M., arriving at Ukiah at 12.10 P. M. The second leaves San Francisco at 3.15 P. M., and arrives at Ukiah at 8.10 P. M. From Ukiah, the trains are 6.25 A.M. and 3.05 P. M. As there is hardly time for a visitor to make the round trip to "The Terraces" after the arrival of the train at 12.30, the better way is to come to Ukiah on the

train which arrives at 8.30 P. M., stay over night, and make the trip the next day. It can be made so as to catch the return train at 1.30 P. M., or an entire day can be taken

TELEPHONE connects "The Terraces" with all points through the Ukiah central. No telephone number needed.

Besides growing a large number of bulbs in my gardens, I employ quite a corps of collectors for wild bulbs, and occasionally take a collecting trip myself for some difficult subject. I reach almost all parts of the western United States and can often secure rare desiderata which are not listed.

I am growing tulips, daffodils, and other Dutch bulbs with great success, and have very fine collections.

Bulbs for Heavy Soils

In many parts of California the prevailing soil is that sticky clay, commonly known here as adobe, in which but a limited number of bulbous plants will really thrive. The following native bulbs are the best for such soils.

BRODIAEAS. All; but especially Grandiflora, Californica and Capitata. Least of all, the Floral Firecracker.

CALOCHORTI. The Globe Tulips are at home in adobe. Few Mariposa Tulips like it, yet Vesta, Purpurescens and Claratus are native to the worst kind of adobe, and Oculatus and Citrinus will do well in it.

CAMASSIAS. All species will do wonderfully well in wet adobe.

FRITILLARIAS. Of these, only Pluriflora, Biflora, Agrestis, Liliacea and Coccinea; all of which are native to the heaviest of adobes.

ERYTHRONIUMS. Citrinum, Californicum, Hendersonii and Revolutum will grow well if the drainage is good and shade is provided.

LILIES. Pardalinum will do fairly well; Humboldtii well, and Humboldtii magnificum will thrive if drainage is good.

TRILLIUMS. All of the Sessile class will do well in shaded adobe situations.

Among Dutch bulbs, daffodils and Spanish irises are especially adapted to adobes and gladioli will do very well.

If drainage and shade are right, very fine tulip flowers can be grown the first year, but the bulbs do not maintain themselves as well as in soils better suited to them.

CATALOGS ISSUED. I issue a Catalog of Californian Native Bulbs at intervals, usually every September. I issue an annual Catalog of Dutch bulbs, making a specialty of tulips, daffodils and Spanish irises, and give careful cultural directions for California.

Brodiaea coccinea (The Floral Firecracker)
Dazzling crimson on tall stems; beautiful for rockeries. (See page 7)

A group of Brodiaeas
1, B. Ixioides; 2, B. capitata; 3, B. candida; 4, B. volubilis, or Twining

BRODIAEAS

Brodiæas are a race of hardy bulbous plants and especially adapted to woodlands, hillsides or crevices in rocks, and for naturalization. The grass-like leaves are produced at the base, while the flowering stems are naked and produce either a head or an umbel of very pretty flowers of waxy texture and great keeping qualities. The bulbs are small, ripen hard and can be sent dry to any part of the world by post.

Culture of Brodiæas

In beds or boxes, treat exactly as Calochorti (see page 7).

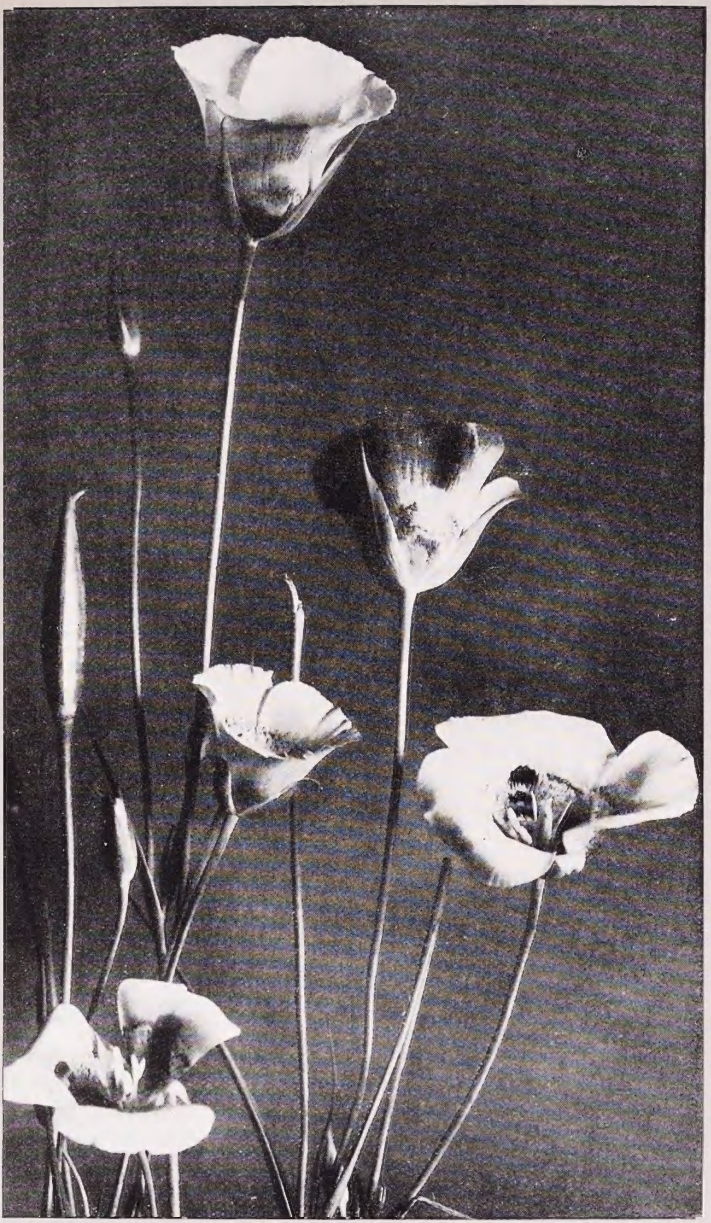
They are especially fine for naturalization, and for that purpose can be stuck in singly or in groups at a depth of 2 inches, making the holes with a dibble or trowel. They are most happy in rich mold in the crevices of natural rock or in rockwork, and in such situations can be planted very closely. Perhaps the best soil is a sandy loam, but they are not particular. A moderately light and well-drained soil, either sandy, gritty, or a sandy clay or garden loam is good. Plant not later than December.

SECTION I. Flowers in Umbels

Candida. The flowers of a very delicate light lilac; fine. 5 cts. each, 60 cts. per doz.
Laxa. Similar, with deep blue flowers, very many in the umbel. 2 cts. each, 20 cts. per doz.
Peduncularis. The flowers with very long stems and pure white. This will thrive in loam or gravel on the border of a shallow stream or in the bed if the water is not over 2 inches deep. 4 cts. each, 40 cts. per doz.
Lactea. Flowers white, banded green; pretty. 2 cts. each, 20 cts. per doz.
Ixioides splendens. Fine, pale yellow flowers. 3 cts. each, 25 cts. per doz.

SECTION II. Flowers in Umbels, Few and Very Waxy and Lasting

Californica. The largest Brodiæa. Stems 2 feet high; flowers pinkish. A fine plant. 3 cts each, 30 cts. per doz.
Grandiflora. Flowers large and deep lustrous purple 2 cts each 20 cts per doz.
Stellaris. A dwarf sort forming a starry circle of purple flowers; white centered. 3 cts. each, 30 cts. per doz.



Calochortus venustus oculatus

This lovely Mariposa Tulip is one of the hardiest varieties. It is white, while var. citrinus is deep lemon

BRODIAEAS—SECTION III

Flowers in Heads. Californian Hyacinths

The stems are a foot or two in height, bearing a close head of true violet-colored flowers. Very graceful. Especially fitted for naturalizing either on rough ground or in clay. For this purpose, small bulbs, 75 cts. per 100, $5 per 1,000; large bulbs, 3 cts. each, 25 cts. per doz.

SECTION IV. The Floral Firecracker

This wonderfully striking plant is well named. The flowers hang in umbellate clusters, for all the world like fire-crackers in shape, and of a vivid crimson, tipped pea-green for a fuse. Among ferns, for rockwork, or in the shaded corner, they are very effective, and they do well in shaded places on rocks. They grow in clays, gritty soils, and best of all where there is leaf mold and sharp drainage. Small bulbs to naturalize, a part will flower the first year, $1 per 100, $7.50 per 1,000; large bulbs, 5 cts. each, 50 cts. per doz.

SECTION V. Twining Brodiaeas

Still another striking plant, in which the flowering stems will twine around any support. The buds slowly develop until a cluster of pretty pink flowers tip the twining stem. Large bulbs, 5 cts. each, 50 cts. per doz.

BLOOMERIAS

Almost like Brodiæas, and with golden yellow, many-flowered umbels. *B. aurea* is a fine plant. 4 cts. each, 30 cts. per doz.

CALOCHORTI

These are lovely bulbous plants which are best described under the separate groups.

Culture in California

Let the bed be slightly raised, and with the drainage perfect. A raise of 3 inches with a slight slope will assure this.

Soil. No fresh manure must be used, but any loam will do, although sandy loam best meets the needs of the greater number of species. Still, clay loam, gritty soil, or even adobe, if lightened with sand, grit, spent tanbark or leaf-mold will give good results.

If only a few dozen are grown, it is really better to plant them in a flat box, when 10 inches of soil is ample.

Time to Plant. Plant as soon after October 1 as possible, and not later than January 1.

Depth to Plant. Two to 2½ inches is ample.

Distance Apart. They will thrive 2 inches apart each way.

Water. During our winter and early spring, the rains are sufficient, but if the spring is dry, keep the ground barely moist after April 1, and water liberally when the buds show for bloom.

Care of Bulbs after Flowering. If the bed can be left dry all summer, do not dig the bulbs and they will come up again in the fall. They should not be watered during the summer, and if the bed is where watering is done it is better to dig the bulbs and store them without packing material in paper bags, in any dry, cool place. One advantage of planting in a box is that the box can be put in a dry place and the bulbs left undisturbed. A box 2 x 3 feet will hold fifty or seventy-five bulbs.

Gophers. These troublesome rodents are very fond of Calochortus bulbs as well as of Tulips. If they cannot be poisoned or trapped, they can be kept out in several ways. I have found that an underground fence made of 2-inch planks set 2 feet deep with an inch above the surface will keep them out. Another method is to make a fence under ground of wire screening. This can be had 2 or 3 feet wide. Still another good way is to make a large sunken box, with only the top of the side boards showing above the ground. Ten inches is deep enough. Such a box can have a bottom of wire mesh or roofing tin.

Culture of Calochorti in the Eastern United States

Calochorti will endure the coldest weather in the eastern United States, but suffer from premature thawing followed by freezing.

(1) In Open Ground. Miss U., living along the Hudson river, has been successful every year with many varieties. She writes:

"I have again had splendid success with my Californian bulbs, and have flowered every one. I have planted the first of November in rather sandy soil. The bed is well drained and in quite a sheltered spot. It gets the full sun until about 3 in the afternoon. Before the ground freezes hard, I have given it 3 or 4 inches of dried leaves. These have been removed in the spring when all danger of heavy frost is over.

"I have found it a good plan to have a few leaves around the shoots for a while and to keep some extra leaves at hand at night when the frost threatens. In this way, have succeeded delightfully with the Venustus varieties, the Globe Tulips and Gunnisonii. My bed of Erythroniums was a perfect success. The Globe Tulips always give a good account of themselves."

(2) In Coldframes. With any ordinary care, all Calochorti can be grown splendidly in coldframes. They should be treated exactly as for open beds, except the soil will be better with some leaf-mold. Do not coddle, but simply protect from freezing and thawing. After ripening, keep the sashes on all summer so that they will stay dry. I have glowing reports from customers who have grown them this way.

(3) In Pots. While they cannot be forced much, they can be grown in pots fairly well as follows: Use a sandy or loamy soil with good drainage. Plant 1½ to 2 inches apart, which will give six to twelve to a 6-inch pot. Moisten the soil and put the pot in a dark place, a cellar preferred, for about six weeks, to let them root. Then bring into a warm, sunny place and water moderately. After flowering, let them ripen well and then dry off and leave perfectly dry until fall.

The Globe and Star Tulips will do fairly well under this treatment and fair success may be had with the Venustus forms. Of other Californian bulbs, Erythroniums, and Brodiæas, of the first section, can also be grown nicely in pots, giving the Brodiæas full sun and the Erythroniums a cool, shady place in window.

Culture in England

Is the same as in California, excepting that the bed should slope more in order to shed the heavy rains and have more drainage material. Cover in the fall with reeds to shed the rain and remove the reeds in late February. Splendid results are had by English growers. The main points are a light, porous soil, sunny position, protection from heavy winter rains, plenty of water when in full growth, and thorough ripening of the bulbs in August, either by taking them up or placing grass over them.

SECTION I. Globe Tulips

The beautiful photograph describes *Calochortus albus* better than any words can. The others are similar in form, while differing in color. All are exquisite in tints, and the perfection of grace in form. They are natives of woodlands, delighting in loose soils, and liking leaf-mold and light shades. At the same time, most of them will do well in heavy soils, and are fine subjects to naturalize on rocks or shaded woods.

Albus, Fairy Lantern. White. 3 cts. each, 25 cts. per doz., $2 per 100; medium-sized bulbs for naturalization, $1.50 per 100, $10 per 1,000.

Albus, The Pearl. A still finer flower. 4 cts. each, 40 cts. per doz.

Amœnus. Soft rose-pink. 5 cts. each, 50 cts. per doz.

Amabilis. Rich yellow. 3 cts. each, 25 cts. per doz., $2 per 100; smaller-flowering bulbs, $1.50 per 100, $10 per 1,000.

Pulchellus. Most exquisite in lemon color. 10 cts. each, $1 per doz.

Globe Tulips in Mixture. 25 cts. per doz., $1.50 per 100.

SECTION II. Star Tulips. Cats' Ears

Slender woodland plants well shown in photograph. Fine for naturalization in rockwork and woodland.

Benthamii (bright yellow), **Lilacinus** (lilac), **Maweanus major** (white), **Maweanus roseus** (rosy). These four at 3 cts. each, 25 cts. per doz.

Purdyii. Taller; white flowers. 5 cts. each, 50 cts. per doz.

Mixture of Star Tulips, at 20 cts. per doz., $1.50 per 100.

Calochortus albus (Globe Tulip). Exquisite for shady places. They vary in color: C. albus, white; C. amoena, rose; C. pulchellus, lemon; C. amabilis, yellow

CALOCHORTI—SECTION III

True Mariposa, or Butterfly Tulips. Calochortus venustus

In this group of bulbous plants there is an elegance of form, with a wonderful beauty of coloring, which justifies the enthusiastic praise that they have received wherever known. Their exquisitely modeled flowers are erect and cup-shaped like their cousins of Europe and Asia, but are smaller and more graceful. Their branches are slender and often many-flowered, slender and erect. The brilliantly colored flowers have eye-like spots on each petal and sepal, and other delicate markings, with dots, lines and hairs. Only the orchid excels them in varied beauty. It is not to be wondered that the Spanish called them "Butterflies," for which their musical word is Mariposa, for no flower could more perfectly imitate the markings on a butterfly's wings. The bulbs are small and can be mailed dry to all parts of the world.

Venustus roseus. The petals are broad, creamy white, suffused with pale lilac. A rose-colored blotch is at the apex of the petal, a richly marked eye in the middle, while the base is hairy and beautifully tinted. The back of the petal is also richly colored with carmine. A most lovely species. 5 cts. each, 40 cts. per doz.

Venustus purpurescens. In this the flowers may be 3 inches in diameter, creamy white inside for half way, but with purplish center and purple outside. They have no rose-colored blotch, but have the usual eye. It is a strong grower, native to heavy soils, and is one of the best of all Calochorti. Colored plate in "Garden" (London), 1895. 5 cts. each, 40 cts. per doz.

Venustus, Eldorado Strain. The plants are vigorous in growth, and from 1 to 3 feet high and quite floriferous. The flowers are large and the petals have a satiny luster which is most captivating. The variety of colors is remarkable, and not exceeded in any flower even under the hybridizer's care. From white they are found in all shades of lilac to deep purple, in all shades of reddish purple, pink, and salmons, and in rich, deep reds. The markings are so numerous and variable as to be indescribable. Some few have a golden or red blotch near the apex of the petal, all have a rich eye variously marked, and all are beautifully marked and penciled about the base. They all grow together and the mixed bulbs as offered give endless surprises. There is no better investment for the flower-lover than a hundred or more. In addition to general cultural directions, I would say that this strain especially likes some shade and a very porous soil. AVOID HEAVY SOILS. MY SUPERB MIXED BULBS, 4 cts. each, 40 cts. per doz., $3 per 100; second size, $2 per 100.

Venustus oculatus. These are among the very best Calochorti. Sturdy stalks bear flowers sometimes 4 inches across. In color they vary from white and cream through lilac to purple. The eye is large and richly zoned, the pencilings about the base are very delicate, and the flowers very attractive. 3 cts. each, 25 cts. per doz., $2 per 100.

Venustus citrinus. This superb variety is like the last, but lemon-yellow, with almost black eye. In England this is considered the finest of all Calochorti. It is the largest seller of all with me. 3 cts. each, 25 cts. per doz., $2 per 100.

Vesta. This may be considered a variety of *C. venustus*, but I think it distinct. It is a species of my own, found in heavy clay soils, which nearly all of the other species are so impatient of. As a grower, it is the best of all Calochorti, and will succeed in almost any ordinary soil. The immense flowers are from 3 to 5 inches across, borne on long, separate stalks, and numerous. Color white, suffused with lilac or rose-purple. Center red, back of petal purple, beautifully oculated. I think it THE BEST OF ALL CALOCHORTI. Reports from Europe put it in the first rank. Supply certain. The frontispiece shows a fine picture of this lovely flower. Very large, 10 cts. each, $1 per doz.; good, 7 cts. each, 60 cts. per doz; small bulbs, to naturalize, $2 per 100.

VARIOUS SPECIES OF MARIPOSA TULIPS

All of these are superb flowers which differ from the True Butterfly Tulips in being destitute of eye-like spots on the petals, and in varying much less in markings. Every one of these are beautiful, while some of them are simply exquisite in shadings.

Splendens (The Lilac Mariposa Tulip). A tall, slender, many-flowered plant, with fine lilac flowers of a deep reddish lilac, finely marked at base. 4 cts. each, 40 cts. per doz.

Splendens rubra. This is a tall species from Lake county, Cal., which bears large flowers of an exquisitely beautiful, satiny pink. It grows in a sticky adobe and is more likely to prove hardy than the first form. 6 cts. each, 70 cts. per doz.

Butterfly Tulips. Calochortus venustus roseus (spotted, at top) and C. venustus Eldorado

CALOCHORTI, continued

Plummeræ rosea. Often 3 or 4 feet high and much branched, with great satiny pink flowers which are covered on the lower half of the inside with long, silky yellow hairs. It must be especially well drained and must have a gritty or sandy soil. 10 cts. each, $1 per doz.

Clavatus. The largest-flowered and the stoutest-stemmed of all of the Mariposa Tulips. The blooms, which are shaped like a broad bowl, are over 4 inches across, of a deep yellow, and the lower half covered by stiff yellow hairs, each tipped with a translucent knob, which in the light looks like an icicle. The stem is very stout and zigzagged. 15 cts. each, $1.50 per doz.

Nuttallii. An exquisitely lovely, white-flowered plant, from the arid portions of the Great Basin. In purity of color and daintiness of marking it is notable. 5 cts. each, 50 cts. per doz.

Gunnissonii (The Colorado Mariposa Tulip). An exquisitely beautiful species with white flowers, banded with green hairs at base, and often with color markings. Very hardy. 6 cts. each, 60 cts. per doz.

Leichtlinii. A subalpine form of the latter, growing to an altitude of 9,000 feet in the Sierra Nevadas; a slender plant with smoky white flowers, beautifully marked and quite pretty. It should be perfectly hardy in cold regions. 5 cts. each, 50 cts. per doz.

Macrocarpus. Unique in the shape of the flowers, which have long, narrow-pointed petals of a pale silvery lilac, with bands of green down the back. 6 cts. each, 60 cts. per doz.

Catalinæ. A superb thing in lilac, with almost black spot at base; resembles the Butterfly Tulips. 10 cts. each, $1 per doz.

Nitidus. A most unique and lovely plant midway between the Mariposa Tulips and the Star Tulips. It is a native of the Northwestern regions, where it grows in cold, wet spots, and endures great cold. Strong-growing, with from five to ten blossoms in an umbel. The flowers are large and white, with an indigo blotch in the center of each petal. Covered inside with silky hairs. 3 cts. each, 25 cts. per doz.

Calochortus maweanus major (white). Dainty and beautiful; 4 to 10 inches high. C. Benthamii, yellow; C. lilacinus, lilac; C. Purdyii, white and much larger than others

Dainty plants for shaded nooks or rockwork in little colonies. See page 8 for prices

Giant Dog's-tooth Violets (Erythronium Californicum)
represented in this half-tone, are of a rich creamy tint. Imagine the beauty of thousands dotted among low ferns and wood plants

CAMASSIAS

These are extremely hardy and easily grown bulbous plants which will succeed admirably in any loamy soil and which will thrive especially in clayey soils which are wet in winter. They bear many long grassy leaves at the base and produce a long, many-flowered spike of starry flowers. They are desirable for any garden and will establish themselves and thrive year after year without care. For naturalizing in damp, grassy spots, about ponds or on creek margins, they are invaluable. They are quite able to maintain themselves and their tall stems are well fitted for such places. Plant 3 inches deep and from 3 to 4 inches apart. All Eastern customers report good results with Camassias, and in Europe they are considered of the easiest culture.

Esculenta, Purple. Tall, with deep purple, handsome flowers. 2 cts. each, 15 cts. per doz., $1 per 100; blooming bulbs, $5 per 1,000, not prepaid.

Esculenta, Pale Blue. Same price as above.

Leichtlinii, Deep Purple. A showy species, with tall, strong stem. 5c. each, 50c. per doz.

Leichtlinii, Cream-colored. The same, with cream-colored flowers. 7c. each, 60c. per doz.

Cusickii. A giant among Camassias, with stems several feet high and very many pale blue flowers. 10 cts. each, $1 per doz.

FRITILLARIAS

GROUP I

Very pretty, lily-like plants, thriving wild in heavy clays or adobes among grasses. They are seldom over a foot high, with lily-like flowers. Their culture is easy. If treated as for Calochorti, or in any loam, they do well if planted up to December 2 inches deep and 3 inches apart each way.

Fritillaria recurva
The finest of the world's Fritillarias. Orange and scarlet

Pluriflora (reddish purple), **Biflora** (nearly black), **Agrestis** (Greenish, lined dark brown), **Liliacea** (Greenish white).

Either of the above at 6 cts. each, 60 cts. per doz.

GROUP II

All of these Fritillarias are tall, slender plants, living in light soils in woodland, and they require a soil containing some mold and well drained, with some shade. In cultivation, the treatment recommended for Calochorti will suit them if the bed is shaded. They are admirable for naturalizing in woodland or glen. In beds, coldframes or pots, treat like Calochorti. Plant 3 inches deep and as far apart.

Lanceolata. Flowers greenish brown, mottled with brown.

Lanceolata gracilis. Flowers reddish black.

Recurva. The finest of the world's Fritillarias, and as handsome as most true lilies. A well-grown plant has as many as a dozen brilliantly clear orange-scarlet flowers spotted orange in the throat.

Coccinea. Like the last; even more richly colored in crimson, but lower growing. This will grow very satisfactorily in heavy clays.

Either of the above at 6 cts. each, 60 cts. per doz.; smaller bulbs at $3 per 100.

GROUP III

In this group the stem is low, with one or two clear yellow, fragrant flowers coming very early. It grows wild in the Great Basin under bushes in a sandy loam, but grows easily in any loose, light soil. Easily grown as a pot plant or like Calochorti. There is but one species. Very hardy.

Pudica. Light yellow. 6 cts. each, 60 cts. per doz.; smaller bulbs, $3 per 100.

Giant Dog's-tooth Violets (Erythronium Hendersonii)
A charming variety; purplish, with nearly black center

RARE FOREIGN LILIES

Sulphureum. This is a glorious Lily from India which delights in a peaty soil and good drainage. The flowers are great creamy trumpets 10 inches long and very fragrant. $1 each.

Philippinense. Another lovely trumpet Lily, pure white, with delicate grassy foliage. Plant in April or early May in a clayey soil, water well and mulch, and the lovely flowers will come in September. 15 cts. each, $1.50 per doz.

CATALOGS ISSUED. I issue a Catalog of California Native Bulbs at intervals, usually every September. I issue an annual Catalog of Dutch bulbs, making a specialty of tulips, daffodils and Spanish irises, and give careful cultural directions for California.

DOG'S-TOOTH VIOLETS (Erythroniums)

The charm of these most beautiful woodland plants is so well pictured in the accompanying half-tone pictures that little of the description is needed. If they had no other beauty than that of their richly mottled leaves, they would be well worth a place in the shady corner; but their flowers are indeed very fine, and, in the Western species, often 3 inches across, with stems at the most 18 inches high, although oftener from 3 to 6. Their colors run in delicate tints of white, pink, cream, bright yellow and even rose, and all are fine. If given a winter covering of leaves, they are hardy in the coldest part of the United States, and while they are at their best in a loose, gritty soil, rich in leaf-mold, they also thrive in the greatest variety of clays, grits, rocky soils, and even sticky clays, as well as light sandy loams. In woodlands, in shaded corners, or in the crevices of rockwork in shade, is the place to naturalize them and they should be planted in such numbers as to carpet the ground. Plant in early fall 2 inches deep and from 2 inches apart up.

"Our one great success with Californian bulbs was with Dog's-tooth Violets."—E. O. Orpet, in Country Life in America.

"My bed of Dog's-tooth Violets was a perfect success."—Miss U, of New York.

Dog's-tooth Violets can be grown in pots or in the coldframe in the way recommended for Calochortus. *E. Hartweggii* is the best for pots.

Grandiflorum robustum. A very attractive plant with unmottled leaves and flowers of the brightest buttercup-yellow. 4 cts. each, 40 cts. per doz., $3 per 100.

Californicum. One of the very best. Flowers cream-colored, often with four to five on the stem, and the leaves are very richly mottled. It is easy to grow and a large colony is a beautiful sight. 2 cts. each, 20 cts. per doz., $2 per 100, $12 per 1,000 for large bulbs. Smaller bulbs cheaper.

Hartweggii. This variety is as pretty as the last and differs in having more yellow in the flower and that each flower has a separate stalk. Very early, and stands more heat than the others. Good for pots. Large bulbs, 2 cts. each, 20 cts. per doz., $2 per 100, $12 per 1,000. Smaller bulbs cheaper.

Hendersonii. Like Californicum, but the flowers a lovely light purple with the centers a deep maroon, almost black. Most striking. 4 cts. each, 40c. per doz., $3 per 100.

Revolutum. With lightly mottled leaves and fine flowers, one or two to the stem. It will thrive in soils that are wet in winter, if dry in summer. Flowers white, tinged purple. 4 cts. each, 40 cts. per doz., $3 per 100.

Revolutum Johnsonii. Deep rose and very beautiful. 5 cts. each, 50 cts. per doz.

Revolutum Watsonii. White, banded brown. 4 cts. each, 40 cts. per doz., $3 per 100.

MIXED ERYTHRONIUMS. I put up a fine mixture at 20 cts. per doz., $1.50 per 100, $10 per 1,000.

CALIFORNIAN LILIES

In the number and beauty of its Lilies, California ranks next to Japan. Our Humboldtiis are among the most stately of the world's Lilies. None excel our Washingtonianums in exquisite fragrance. Our Pardalinum is the best of all that the world produces, in its adaptability to ordinary garden conditions. Our Parryii, with its deliciously scented lemon-colored flowers, would be placed by a large majority of the world's growers among the two or three most lovely of all known species.

My specialty is California Lilies, and in my Terrace gardens is the largest and most complete collection in the world. It is worth a long journey to be there when the thousands upon thousands of plants are at the height of their flowering season.

Californian Lilies can be well divided into four sections, according to their affinities, and into two groups as to their culture.

Culture of Group I

The Lilies of the Humboldtii and the Washingtonianum groups are natives of cool slopes in mountainous regions, where they grow in forests, or where protected by a growth of shrubs. The soil is deep, perfectly drained, composed of clay or a rich loam mixed with leaf soil and the debris from broken-down rocks.

In cultivating these Lilies, we should take lessons from nature:

(1) Situation of the Lily Bed. They should be planted where they are protected from cold winds and the soil is not dried out by the direct heat of the sun. On

Lilium Humboldtii

One of the grandest of the world's Lilies. The type, orange, spotted maroon. The easily grown Var. Magnificum, the same richly eyed with scarlet

CALIFORNIAN LILIES, continued

large grounds, the ideal location is a glade in the woods, but the partial shade of deciduous trees, the shelter of rhododendrons or bamboos, or similar shrubs, or of tall-growing perennial plants, may give conditions quite suited to their culture. A protected nook on the shady side of the house is best on small grounds, and ferns are congenial neighbors.

(2) Drainage. This must be perfect. If the ground is heavy and clammy, underdrainage should be given, and the soil made lighter and looser by the addition of humus and porous materials.

(3) Soil. This should be a fairly good loam, mixed with humus and sand. New manures are always to be avoided with Lilies.

(4) Planting. They should be planted so that the top of the bulb is not less than 4 inches from the surface; about each bulb put a layer of an inch or so of sand which will carry away excessive moisture and prevent fungous attacks.

(5) Watering. Lilies should not be kept water-soaked, but should have a moist surface during the growing season. They are better to be kept rather dry after they have flowered.

Never move a lily bulb unless absolutely necessary.

My very best success with Lilies of this group has been in a very loose, gravelly soil, rich with leaf-mold and with water running above and percolating under the roots.

Culture of Group II

The second group into which I would divide Californian Lilies as to culture, comprises all of the so-called Bog Lilies. The Pardalinum and Parvum group are so classed.

These Lilies grow naturally along the banks of small, living streams, on the borders of lakes and ponds, in deep, alpine meadows, on the borders of or on raised hummocks in bogs. Their bulbs are not so deep as the others, and they are more dependent upon surface moisture. The soil in such places as I have mentioned is always rich in rotten leaves, and usually sandy; sometimes it is peat or pure humus. Low shrubs or tall plants protect the surface from heat, while the tall stalks rise above them into the sunlight. Be careful as to the following points:

(1) Drainage. The fact that they like moisture does not mean that they like a water-soaked soil. Many failures with Bog Lilies are due to this error. Better err in the direction of dryness. If the roots can go down to moisture, all the better, but don't, of all things, put the bulb in wet, gummy soil.

(2) Soil. A light, sandy loam mixed with leaf-mold or peat is the best possible.

(3) Situation. My description of the natural habitat will suggest the best location where large and varied grounds give a choice. On the margin of a pond or brook, planted a foot or so above the water-level, in moist, meadow-like expanses in sheltered places, or damp openings in woods. These are ideal locations for all of these Lilies.

In small grounds, a hydrant can be so arranged as to give a constant drip; the fern corner is good, and the rhododendron bed is perfectly adapted. Pardalinum will grow splendidly where good potatoes can be produced if the ground is a little shaded.

During 1906, a careful test was made at the Missouri Botanical Garden, in which all of the Western Lilies, and also the native Eastern sorts, were planted in a well-prepared and carefully drained bed. Of twenty-three Western species, seventeen flowered the first year, while five gave no bloom. Of the Eastern sorts, none flowered. Among the Californians, Pardalinum fragrans, Rœzlii, Burbank's Humboldtii Pardalinum and Humboldtii magnificum did best, while the forms of Washingtonianum were poorest. I understand that no extra protection was given, so this is a fair test of hardiness.

A lady in "Garden Magazine" for September, 1907, writes: "Although only one of my three bulbs of the Leopard Bog Lily (*L. Pardalinum*), planted in the fall of 1905, bore flowers this season, nine stalks appeared from three bulbs, three of which were in flower about the middle of July."

A customer from Akron, Ohio, writes that *Lilium Humboldtii magnificum* did finely there without protection.

Mr. E. V. Hallock, one of the largest bulb growers in America, in his time, in an address before the Society of American Florists this August, says: "*Lilium Pardalinum* from California is a good-keeping, free- and sure-flowering Lily. Ninety-five per cent of the bulbs should bloom. *Lilium Parryii* from California is a very handsome yellow variety, and is not difficult to bloom." Mr. Hallock does not think well of Humboldtii and Washingtonianum for the East, and I cannot recommend the type Washingtonianum which I will not sell on account of their poor growing and keeping qualities. On the

Washington Lily (Lilium Washingtonianum purpureum)
A grand Lily, opening white and gradually turning purple

CALIFORNIAN LILIES, continued

other hand, *Lilium Washingtonianum purpureum* is a good grower and keeper, and *Lilium Humboldtii magnificum* cannot be excelled.

Lilium sulphureum. A magnificent Lily, native of Himalayas. Tall stem, with immense, long, spreading trumpet, which is white, with creamy throat. Very fragrant. There is no grander Lily known. It likes well-drained, porous soil, and enough water to keep the surface moist during its growth. Very fine bulbs, $1 each.

LILIUM HUMBOLDTII AND ALLIED SPECIES

Humboldtii. A grand Lily, growing as tall as 10 feet, but usually 4 or 5 feet high, with very stout stem and many large, orange-red flowers, spotted with small maroon spots. Immense, 9 inches and upwards in diameter, 40 cts. each, $4 per doz.; very large, 8 to 9 inches in diameter, 30 cts. each, $3 per doz.; fine, 7 to 8 inches in diameter, 20 cts. each, $2 per doz.

Humboldtii magnificum. A grand species, differing from preceding in darker foliage, in the spots on the flowers being each surrounded by a circle of crimson, and in splendid growing and flowering qualities. It is sure to flower the first year after planting, and is a splendid grower. None better. Good bulbs, 30c. each, $3 per doz.

Humboldtii Bloomerianum. Like the preceding in color and flowering qualities, but with a very small bulb and a small stem. Very pretty. 30 cts. each, $3 per doz.

Columbianum. Like a miniature *L. Humboldtii*. Bright golden yellow, spotted maroon. 2½ to 3 feet. Good. 20 cts. each, $2 per doz.

Bolanderii. One of the rarest of Lilies; 1 to 3 feet high, slender, with bell-shaped, deep crimson-red flowers, dotted purple. 40 cts. each, $4 per doz.

LILIUM WASHINGTONIANUM AND NEAR SPECIES

Washingtonianum purpureum. The fine half-tone shows the flowers to perfection as to form. They are from white to a rich wine-color and change after opening. Often 6 or 7 feet high, with a stout stem and many leaves, and as many as twenty-five flowers. The flowers are very fragrant. The bulbs are easily handled but will not give a good bloom the first year. The Shasta Lily is a variety of this Lily. Large bulbs, 8 to 9 inches in circumference, 30 cts. each, $3 per doz.

Rubescens (The Redwood, or Chemise Lily). A beautiful and very distinct Lily, having tall, slender stalks and exquisitely fragrant flowers of a tubular shape. On opening, they are white dotted purple, but soon change to deeper purple and all colors between white and purple will be seen on one stem. To succeed with this, drainage must be perfect. It is not easy. 40 cts. each, $4 per doz.

Kelloggii. Three to 4 feet high, with a slender stem and from three to fifteen flowers with pink, revolute petals. Very fragrant. 40 cts. each, $4 per doz.

LEOPARD BOG LILIES

Pardalinum. This is one of the best Lilies for the garden. It grows well in any loam or gravelly soil, in sand, or lighter clays, as long as given some shade and watered moderately. The stout stems are very leafy and from 3 to 6 feet high, and the many large and very showy flowers are very richly colored with orange centers and crimson tips, with many spots in the central section. No Lily is more likely to give satisfaction in the garden. Robert Wallace, first among the world's Lily-growers, says of this Lily: "*L. Pardalinum* and its varieties are certainly among the finest Lilies known. Planted in moist peat, they attain a great height, flowering in great profusion and increasing rapidly. Though doing best in peat, they will do well in any garden soil." 10 cts. each, $1 per doz.

Pardalinum, Glow. This is the finest Lily that I have ever introduced. With the good qualities of Pardalinum, it has a flower in which the upper part is an intense crimson, and the center orange-red, finely dotted with brown. Almost as intense in color as Tenuifolium. $1 each.

Pardalinum, Defiance. Among the seedlings from Mr. Burbank, I found a very tall form, possibly a hybrid with the general habit of Pardalinum, but the heavily spotted flowers showing much yellow and boldly facing out instead of the nodding habit of the type. I think it a good thing. 30 cts. each.

Rœzlii. Stem slender, leaves crowded, very long and slender, the closely revolute perianth a clear reddish orange throughout, dotted maroon. A rare Lily, long lost, but reintroduced by myself. 20 cts. each, $2 per doz.

Forms of the Leopard Lily. The best of all Garden Lilies

It thrives in any good garden soil, and will hold its own for many years. A most showy lily 3 to 8 feet high

PARRY'S LILY

Parryii. One of the world's finest species. The slender, leafy stem is from 3 to 5 feet high and bears from a few to twenty-five long, trumpet-shaped, lemon-yellow flowers. It is sweetly fragrant. In some forms, the center is faintly dotted brown; in others the color is solid. Very large bulbs, $1 each; fair bulbs, 40 cts. each, $4 per doz.

I sent a special collector to the high mountains where it grows, with instructions to spare no trouble to secure the finest bulbs. *Lilium Parryii* is not a very easy Lily to grow. My collectors find it finest along the banks of streams where the water has made deposits of silt, leaves and charcoal and dead wood. There, with its bulb well above the water, the roots run down to perpetual moisture. *L. Parryii* can at this time only be found in high alpine valleys, and the bulbs flower when very small.

SMALL-FLOWERED BOG LILIES

Parvum. A charming little Lily, which, under favorable treatment, grows 5 or 6 feet high, with many small, bell-shaped flowers. It is orange at the center, with crimson tips. From the subalpine regions about Lake Tahoe. 20 cts. each, $2 per doz.

Parvum luteum. A taller variety, with clear yellow flowers, more revolute at the tips. 20 cts. each, $2 per doz.

Parviflorum. A very charming Lily, like a miniature Pardalinum. The earliest-flowering of our species. 15 cts. each, $1.50 per doz.

Maritimum. A beautiful Lily, with dark red funnel-formed flowers. 20 cts. each, $2 per doz.

BURBANK'S HYBRID LILIES

During a period extending over a number of years, Luther Burbank, who is now recognized as the greatest improver of plants the world has ever known, crossed and hybridized Lilies. In the course of his experiments, thirty or forty of the world's Lilies were used, and hundreds of thousands of plants grown from the seed and flowered. No experiment in the improvement of Lilies can be mentioned in the same breath, either when the number of individuals grown in the effort or the results produced are considered. At the conclusion of his work, he had perhaps a hundred plants which had been selected from a vast number of the very best. One of these, a cross between Pardalinum and Washingtonianum, a good Lily, but, by no means, the best, was introduced and, with his consent, called *L. Burbankii*. The others were turned over to me to be put in my Lyons Valley garden (where conditions were ideal for their culture), to be further selected from, and the very best propagated. In their new home, they have done well, but the process of scale-propagation is a slow one, and it will be several years before some of the magnificent species which were represented by a single bulb will be grown in sufficient quantity to offer to the world. I am able to offer to the world on joint account of Mr. Burbank and myself these fine varieties, either of which is a grand acquisition.

Hybrids of Pardalinum and Humboldtii. Of these there are fifty forms which I will sell in mixture. All share in the vigor of Pardalinum as a grower and the very strong habit of Humboldtii. All are splendid flowers, in shades of orange and crimson, and dotted maroon. The bulbs are rhizomatous, very large and heavy, and the stalks grow from 5 to 7 feet high. They are truly grand Lilies. 50 cts. each.

Pardalinum, Red Giant. Mr. Burbank's records were not perfect as to the parentage of all of the hybrids. This is unquestionably of hybrid origin, but its parentage is not traceable. The stems are very heavy and leafy and of medium height. The immense broadly spreading flowers are orange at center, with a broad expanse of the deepest crimson. A most striking novelty. 75 cts. each.

There are still to come a set of fragrant Pardalinum-Parryii hybrids, with yellow and lemon-colored flowers as large as a Harrisii, and very beautiful.

TRILLIUMS

Trilliums are very attractive plants of the lily family, and the forms known as Wood Lilies or Wake Robins are well known in the East and are fine woodland plants. Of these, the best is *T. grandiflorum*, to be had from most Eastern dealers. In the forms *T. sessile*, we have an altogether different tribe and a much better one from the standpoint of easy culture and ability to hold their own for years in the garden. The accompanying photograph is of a colony at Ukiah which, with no care, has increased in beauty

Trillium sessile Californicum. An old group in a fern bed

TRILLIUMS, continued

for at least fifteen years, and I have seen many such. A better plant for the shaded corner, damp woodland, border of streams, where the soil is moist, or for the shaded parts of the garden, does not grow. It takes a year for them to take good hold, but they will then improve for years. The flowers come early, are fine and very lasting and the leaves are handsome. There is no better bulbous plant to naturalize, and I have them in perfection in gravel, loam, sand, and heavy clay, and in each case, with no care whatever, and with our dry Californian summer. I have three color forms.

Sessile Californicum. A small plant, a foot high, with the separate leaves 5½ inches long, by 4½ inches wide, and the petals 3½ inches long. Flowers pure white, with purple centers. Very fragrant. Forms masses of many individuals.

Sessile, Snow Queen. Same, with broader petals, and flowers pure white, with creamy centers.

Sessile rubra. Same, with narrow petals; deep maroon-purple to reddish purple.

Petiolatum. An interesting form, similar with petioled leaves and a smaller flower.

All of the above at 5 cts. each, 50 cts. per doz., $4 per 100, good small bulbs of the first two at $3 per 100, $25 per 1,000. The larger part of these small bulbs are of flowering size.

CALIFORNIAN ORCHIDS

Even terrestrial Orchids are not plants for the ordinary careless gardener. A bed must be specially prepared and shade and moisture carefully watched. For the Cypripediums offered, a shaded, well-sheltered position must be chosen. The drainage must be perfect, and the soil have a good admixture of rotten leaves. The bed had better be mulched well with rotten leaves. Peat is better than leaf-mold and a light soil, either sandy or gritty, is better for the base. Water often during growth, but only moderately after midsummer.

Epipactes is not at all hard to grow. It likes to be near running water, and will succeed in any soil fairly rich in leaf-mold. It does well in the sun.

Montanum. Our lovely Western Lady-Slipper, and one of the best hardy sorts. Flowers white, with brown wings and very fragrant. 10 cts. each, $1 per doz.

CALIFORNIAN ORCHIDS, continued

Californicum. A large-leaved bog plant, with rather small yellow flowers. Needs much peat and water. 25 cts. each, $2 per doz.

Epipactes gigantea. This is a most charming plant, like a small, brown Lady-Slipper. It is one Orchid that is easy to grow. It forms large masses when undisturbed in loose, damp soil. 15 cts. each.

AMERICAN COWSLIPS (Dodecatheons)

These dainty plants are among the most charming wild flowers of California. With our fall rains they begin to grow, and the first mild days in the early spring bring their sweet blossoms. They ripen early with us, and in the summer the spider-like roots become so dry that they break at the touch, but a little moisture quickly starts them into life again. All are beautiful, and California gives a charming variety in color and habit. There is a bog-growing form in the high mountains (Jeffreyii) which I do not handle.

Either as pot plants for forcing, or in the garden, they are easily grown and pleasing. Any ordinary garden soil will do, although they thrive best in a sheltered (not necessarily shaded) situation, in loose, well-drained soil, in which there is a mixture of rotted leaves.

Clevelandii. One of the best. Tall-growing, with fine flowers, pure white, or delicately suffused with pink. I cannot supply the pure white variety separately. 4 cts. each, 40 cts. per doz.

Hendersonii. The best red species. 3 cts. each, 25 cts. per doz.

Patulum. Yellow. 3 cts. each, 25 cts. per doz.

WILD-FLOWER SEEDS

Our state is peculiarly rich in beautiful wild annual flowers and it has also many fine perennials. Many of these have for a long time been in cultivation and are found in all seed catalogs. Some have been so changed by cultivation that they are not as well adapted to wild sowing here as the wild sorts. This is a selected list of some sorts that I have myself grown and found especially good. It will be much enlarged next fall. Almost any grounds have some unused corner which can be beautified by sowing a packet or two of such things.

TIME TO SOW WILD FLOWER SEEDS

In California, the best time to sow is in early fall, either before or just after the first rains. They can, however, be sown much later and, if watered, good results can be had with spring sowing. I sow in February and do not water.

MANNER OF SOWING

Mix the seeds with quite a bulk of dry dirt that they may be scattered widely and evenly. If in beds, of course do not distribute widely. If sowed before or just after the rains, no raking in is necessary, although it would do no harm. If sown after the grass and other vegetation has become dense and heavy, it would be necessary to work the surface and kill the grass, then lightly rake the seed in. If planted late, it is well to lay some light brush over the beds until the seeds are up.

BEST PLACE TO SOW

In many places the annual grasses form a dense mat after they start and less vigorous things could not hold their own. In such cases it is necessary to hoe the surface after all seeds have started and reseed every year. If the ground chosen is rather tough and poor, many of the annuals are quite able to resow themselves and hold their own. The ground below newly built roads or paths is especially fitted for many of them. This is especially true of Eschscholtzias and Godetias.

Prices, in retail pkts. at 10 cts. each, $1 per doz. For naturalizing, quantities much cheaper

Following is a list of some of my leading varieties: **Coreopsis tinctoria, Gilia tricolor** and **G. liniflora. Godetias** in four superb wild variations. **Layia elegans, Limnanthes Douglasii, Nemophila maculata** and **N. insignis, Eschscholtzia Californica** and **Golden West** and **E. tenuifolia,** the best of the wild forms. **Cream Cups,** or **Platystemon, Pentstemon heterophylla. Œnotheras,** white, yellow and the orange-colored **Californian Poppy,** or **Papaver Californicum** resembling the **Shirley Poppy.**

These and many other fine things.

CARL PURDY

UKIAH, MENDOCINO COUNTY
CALIFORNIA